

## PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

17 DEC 2004

Applicant's or agent's file reference Case 21188	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/03634	International filing date (day/month/year) 08.04.2003	Priority date (day/month/year) 25.06.2002
International Patent Classification (IPC) or both national classification and IPC A61K7/42		
Applicant DSM IP ASSETS B.V et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
  
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
 

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.
  
3. This report contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand  13.01.2004	Date of completion of this report  12.11.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Menegaki, F Telephone No. +49 89 2399-8277



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/03634

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-27                          as originally filed

**Claims, Numbers**

1-19                          as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description,        pages:
- the claims,           Nos.:
- the drawings,          sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/03634

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-19
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-19
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-19
	No:	Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/03634

(V)

Having regard to the International Search Report as well as the prior art cited by the Applicant in the description the subject-matter claimed differs from document

(D1) Nonlinear Optics, 1999, vol.20, p.73-86;

(D2) EP-A-832641; (D3) EP-A-921126

wherein similar 2-(hetero-)aryl, mainly 2-benzyl substituted benzoxazoles are disclosed, due to the present 2-benzylidene-malonic acid group.

The requirements of Art.33(2) PCT appear to be fulfilled.

The problem underlying the present invention appears to be the provision of novel UV-A sunscreens with good photostability and/or good liposolubility having the formula (II), according to Claims 8-11, monomers and/or intermediates thereof, of formula (I) according to Claims 1-7, as well as use thereof in UV-screening according to Claims 12-19.

Prior art documents (D1)/(D2)/(D3) disclose partly similarly substituted benzoxa-/benzimidazole compounds useful as UV-A sunscreens.

The present 2-benzylidene-malonic acid substituent group appears to be an unexpected structural variation and the skilled man, starting from prior art (D1) to (D3), would not have expected that the introduction of said novel feature would lead to compounds having similar qualitative properties.

Given the fact that the essential 2-benzylidene-malonic acid substituent group is present in all W1-3 moieties of formula (II), the requirements of Art.33(3) PCT appear to be fulfilled for the claimed subject-matter, provided that all compounds claimed possess the claimed properties. The per se claimed monomers of formula (I) in Claims 1-7 can be regarded as inventive in combination with the novel and inventive end products of formula (II).

Moreover, it is noted by the IPEA that Claim 19 appears to be redundant.